

# **PHASE I PROPERTY ASSESSMENT**

For the:  
**BEDFORD II LANDFILL PROPERTY**

Located at:  
**470 MORRISON ROAD  
GAHANNA, OHIO**

Prepared For:  
**CITY OF GAHANNA  
200 SOUTH HAMILTON ROAD  
GAHANNA, OHIO 43230**

**NOVEMBER 2006**

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## **1.0 INTRODUCTION**

### **1.1 General**

The City of Gahanna authorized Hull & Associates, Inc. (Hull) to conduct a Phase I Property Assessment of the former Columbus Clay Manufacturing Company and Bedford II Landfill Property, located on Bricklawn/ Morrison Roads. The former clay pit/brick manufacturing and Landfill has had multiple addresses along Bricklyn/Bricklawn Road and Morrison Road in the City of Gahanna, Franklin County, Ohio (Property). The location of the Property is shown on Figure 1 and photographs of the Property are included in Appendix A-1. The project was executed under Hull project number CGA001 and CGA004 and was conducted by Hull from April 2006 through November 2006. This assessment was conducted by Mr. Josh Jonak, Hydrogeologist II, and Mr. Chase Forman, Hydrogeologist I. Mr. Steve Gross, P.G., Senior Project Manager, provided technical assistance, peer review of the report and project oversight as the Certified Professional under the Ohio EPA Voluntary Action Program (VAP). This assessment was conducted consistent with the requirements of the VAP codified under the Ohio Administrative Code (OAC) 3745-300-06.<sup>1</sup>

### **1.2 Purpose**

The purpose of a Phase I Property Assessment under OAC 3745-300-06 is to:

1. determine whether a property, or portions of a property, are eligible for participation in Ohio's Voluntary Action Program (VAP); and
2. determine if Identified Areas exist at a property;<sup>2</sup>
3. determine the necessity and initial scope of a Phase II Property Assessment.

The assessment was based on information obtained by Hull personnel from review of public documents, files, photographs, and maps; correspondence with regulatory agencies; review of an environmental regulatory database search report; interviews of persons knowledgeable of previous operations and environmental conditions; and a reconnaissance of the Property.

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<sup>1</sup> OAC 3745-300-06 describes the procedures for conducting a Phase I Environmental Property Assessment under the Ohio VAP.

<sup>2</sup> OAC 3745-300-01 (A)(21) defines an Identified Area as any location at a property at which hazardous substances or petroleum are known or suspected to be present.

The Property is located in the industrial section of Gahanna. The surrounding properties included, Craft Steel immediately adjacent to the west, the former Quality Wood Treating Company to the north, Adrian L. Wallick Company and Mid States to the east. Railroad tracks bind the Property to the south and undeveloped land lies beyond the railroad tracks. Legal descriptions of the parcel comprising the Property are found in Appendix B-1.

#### **1.4 Current Property Usage**

The Property is a former clay pit/brick manufacturing facility that was leased and used as a demolition landfill in 1973. The Property was issued a solid waste disposal license by the Ohio EPA in May 1975. The Bedford II Landfill reportedly accepted waste until August 1978. The Landfill operated for a period of approximately 5 years and was closed in 1978. Other than a gas recovery system there are currently no structures on the Property.

The Property is presently owned by BLY Incorporated and is vacant.

#### **1.5 Intended Property Use**

The Property is located within the industrial sector of the City of Gahanna. A copy of the zoning map from the Franklin County Auditor's website is located in Appendix B-2.

## **2.0 HISTORICAL USES OF THE PROPERTY**

### **2.1 Historic Property Usage**

To determine the historical use of the Property, several documents including chain-of-title, zoning information, utility information, aerial photographs, and other documents were reviewed. According to historical records, the Property was operated as a clay pit/quarry for brick production. A brick plant was formerly located on the parcel to the immediate west of the landfill in the area now occupied by Craft Steel Incorporated. Apparently, the Property was abandoned for several years prior to being used as a Landfill. In 1973, Ace Trash Away leased the abandoned clay pit for use as a demolition Landfill. Inspections conducted by the County Health Department documented that more than demolition and construction debris was being disposed on the landfill. The observed waste reportedly contained industrial containers with solvent odors.

In 1974, the Property was leased to Systematic Sanitation Services, Inc. (S.S.S.). The company was issued a solid waste disposal license by the Ohio EPA on May 23, 1975. The owner of the Property reportedly did not renew the lease with S.S.S. due to violations of the lease agreement. At that time, the owner entered an agreement with ECOL, Inc. (a subsidiary of the Claycraft Company) to operate the Landfill. On May 11, 1976, ECOL Inc. purchased the Ohio EPA Solid Waste disposal license. ECOL, Inc. was operating the Landfill at Bedford I Landfill. Operations at Bedford I Landfill were reportedly temporarily halted during operations at the Bedford II Landfill. The Bedford II Landfill reportedly accepted waste until August 1978. ECOL, Inc. began closure activities at the Property after the cessation of waste acceptance. According to the Ohio EPA, closure was not completed pursuant to the solid waste rules (1976 rules) effective at the time.

A Remedial Action Closure Plan was submitted to Ohio EPA in 1987, revised, and approved in 1991. Since the closure was not completed by the date specified in the plan (July 1992), the Claycraft Company was given an Administrative Order by the Ohio EPA to complete the closure. The files maintained by Ohio EPA indicate that closure activities were undertaken for a few years after the Consent Order was issued. However, it did not appear that the Landfill was ever officially closed. A Consent Order was issued to Claycraft Company in 1995 to close the Landfill. Royalties expected from gas production at both landfills was to be used to fund the closure. According to the EPA files 75% of the 6% of the royalty goes to the EPA for deposit

into the combined Bedford I and Bedford II closure funds, the remaining 25% goes to the Landfill owner. However, recent activities conducted at the former Bedford I Landfill have indicated that the Bedford II Landfill's gas extraction system is not running. Currently, the Bedford I system does not receive gas from the former Bedford II Landfill.

Gas extraction wells were observed in the Landfill cover material during the site reconnaissance on August 27, 2002 and July 14, 2006. Based on reviewed OHIO EPA files, the gas extraction system was installed sometime between May 1995 and September 1999.

### **2.1.1 Ownership**

According to documentation reviewed in Ohio EPA files. The Franklin County Auditor's database, and the City of Gahanna's online database, the property comprising the former Bedford II Landfill (Property) consists of five parcels; 025-006164 (22.931 acres), 025-006686 (4.895 acres), 025-006160 (3.707), 025-006692 (0.803 acres), and 025-006693 (0.149 acres). The five parcels were formerly part of a larger 32.485 parcel owned by Clay Manufacturing Corporation. The 22.931-acre parcel which comprises the bulk of the former landfill was obtained by Bly, Inc. from Clay Manufacturing Corporation in November 1996. The 3.707 parcel was obtained by the City of Gahanna in 1979. The two smaller parcels were obtained from Clay Manufacturing by the City of Gahanna in June 1982 in order to build a rail spur to service the growing industry in the area. The Property has been owned by Clay Manufacturing or variations thereof (Columbus Clay LTD, Columbus Clay Manufacturing), since at least 1979. Files obtained from the Ohio EPA indicated that Columbus Clay Manufacturing owned the Property as early as 1920.

A summary of current and historical ownerships is included on Table 1. Copies of the Auditor's information and legal descriptions for the parcels comprising the Property are included in Appendix B-1.

### **2.1.2 City Directories**

Hull reviewed city directories for the City of Gahanna, Ohio for references to the recorded address for the Property of 470 Morrison Road. This address was listed the Ohio EPA files as well as in the environmental database report obtained for this investigation. A review the Mifflin Township Fire Department provided an address of 5656 Bircklyn (Bricklawn) Drive. Both Polk

line, sewer line and a sanitary line are located in the southwest corner of the Craft Steel property. A copy of the utility map obtained from the City of Gahanna's website is included in Appendix B-3.

An additional, sewer manhole was observed during a July 21, 2006 Property visit along the eastern City of Gahanna parcel. Gas retrieval lines were also observed on the Property during the Property visit. Multiple lines were visible running connecting gas retrieval wells located throughout the Property.

### **2.1.5 Aerial Photographs Review**

Aerial photographs obtained from the Ohio Department of Transportation Division of Aerial Engineering and the Franklin County Auditor's Office were reviewed to assist in determining past usage of the Property and adjacent properties. Photographs were reviewed for the years 1947, 1956, 1964, 1972, 1979, 1986, 1994, and 2000. Copies of the photos are included in Appendix B-4.

1947                      The 1947 aerial photograph is of poor quality. Details concerning the property are not apparent. However, color differences allow identifying areas that have had ground disturbances. Based on the photograph, it appears that clay mining was being conducted in the north-western portion of the Property.

1956                      The 1956 photograph shows the clay is being mined in the north central portion of the Property. Haul roads run from the clay pit to the brick production factories, which are located on the parcel to the southwest of the Property. An access road appears to be located along the edges of the property to the north and east. The road stops on the southeast portion of the property where the railroad tracks are present. The southwestern and south-central portions of the property appear to be used as storage of equipment and/or materials. A building is located on the south-eastern corner of the property. The purpose of the building is unknown.

Vegetation is located along the northern boundary of the Property and sparsely throughout.

Surrounding properties to the north of the Property and south of Claycraft Road appear to be predominantly undeveloped or agricultural properties. A haul road is visible running to the Claycraft property, which is not visible in the aerial photograph. Properties to the east are also undeveloped or agricultural properties. Rail Road tracks are located immediately adjacent to the south of the Property. Undeveloped or agricultural properties lie beyond the rail road tracks. The clay manufacturing facility is visible west



of the current Property. This property would have been located in the south-western portion of the Clay Manufacturing property. It appears as though four to five buildings are present on that portion of the property. The kilns are visible west of the main building. Brick storage is visible west of the kilns.

1964

There is little apparent change to the Property from the date of the previous photograph. The high wall of the clay pit is also readily apparent in the east-central portion of the Property.

The surrounding properties appear to be relatively unchanged from the date of the previous photograph.

1972

The 1972 aerial photograph is of a low visual quality. Details concerning the Property as well as the surrounding properties are not evident. Based on the level of detail that can be deciphered, it does not appear that much change has occurred since the previous aerial photograph date. However, the highwall is very distinct in the east-central portion of the Property.

1979

The 1979 aerial photograph indicates that landfill appears to be "covered". The majority of the building that was associated with the clay manufacturing facility has been removed. The kilns are no longer visible at the brick plant. The former clay pit appears to be filled and graded. However, ground disturbances are visible in the north-central and western portions of the property. A storage area is visible in the north-central portion of the property. Many mounds are visible in the eastern-central portion of the Property.

Debris is visible in the vicinity of the buildings located in the adjacent southwestern parcel.

The 1979 photographs show several commercial/industrial facilities along what are now Gahanna Parkway and Enterprise Drive. The Parkway is located to the northeast of the Property.

Immediately north of the Property lies the lumber yard/wood treating facility. Five buildings are visible on the property. Pallets of wood appear to be stored on the property.

1986

The 1986 aerial photograph indicates that bare land is still visible throughout the Property. Numerous unpaved road/paths are located throughout the Property. Additional mounds of soil and debris are apparent in the northwest corner, central portion, and the eastern portion of the Property.

A warehouse/storage building is located west of the Property. The other surrounding properties appear to be relatively unchanged from the date of the previous photograph.

Additionally, the property located north of the Property is listed in the Polk directories as National Industrial Lumber Co (branch), Sylvania Wood Preserving Co. (branch). There appears to be an increase in wood storage on that property. The wood storage occupies the entire central portion of that property.

1994

The Property appears to be more vegetated and the areas that lacked vegetation appear to be less pronounced than in previous aerials photographs. Mounds of soil are visible in the north central portion of the property. A haul road leads to the mounds from the north.

The surrounding properties appear to be relatively unchanged from the date of the previous photograph. However, a building was constructed in the southwestern adjacent property and the debris was removed from that area.

There is little apparent change to the property north of the Property from the date of the previous photograph. Based on the Polk directories, the Quality Wood Treating Company occupied that property during this time.

2000

The 2000 aerial photograph indicates that there is a greater amount of vegetation on the Property. However, sporadic bare spots of land are visible. The mounds of soil in the central portion of the Property are not as visible and the haul road is not as evident. The gas retrieval lines are evident. An additional access road is visible on the southeast corner of the Property from the railroad tracks. It appears that a small structure or trailer is located in the south-western corner of the Property, along the access road.

The surrounding properties appear to be relatively unchanged from the date of the previous photograph. The photograph depicts a lesser amount of wood was being stored on the Quality Wood Treating Company's property.

#### **2.1.6 Sanborn Fire Insurance Map Coverage**

Sanborn fire Insurance Maps were previously requested for the former Quality Wood Treating Company and the former Bedford 1 Landfill, as well as other adjacent properties from *FirstSearch*. *FirstSearch* indicated in a facsimile to Hull dated August 23, 2002 that there was no Sanborn coverage for an adjacent properties. Given the proximity of the Property to previously researched properties, Hull did not request Sanborn coverage for the Property. A copy of the no coverage letter for the adjacent property is included in Appendix B-5.

### **3.0 ENVIRONMENTAL HISTORY REVIEW**

#### **3.1 Previous Studies**

The Ohio EPA was contacted for a file review in order to obtain previous studies. Copies of the correspondence are included in Appendix C. The Ohio EPA's files indicated numerous studies conducted on the Bedford II Landfill. The Ohio EPA and Columbus Board of Health personnel have documented and sampled leachate from November 1981 to July 1991. The Ohio EPA's files included laboratory reports for the leachate sampling events but did not include conclusive reports.

The Ohio EPA files included, Ohio EPA's explosive gas monitoring documentation, correspondence, meeting notes, permit to installs, Board of Health Inspection documentation and photographs. A summary of the reports reviewed in the Ohio EPA files is below.

#### **Notes on the Proposed Systematic Sanitation Services, Inc. Solid Waste Disposal Facility Sanitary Landfill, Gahanna, Franklin County, March 1975.**

Kosanchick and Associates submitted the detailed plans to the Ohio EPA in February 1975 operation of the Landfill. Proposed operations include waste placement trenches in the southern portion of the Property. Waste was also proposed to be placed in the former clay pit area starting in the east-central portion of the property and ending in the north-western portion of the Property. The Plan set from the Proposed Landfill Plans are included in Appendix D-1. Approximate waste placement areas based on Systematic Sanitation Services Plan set are shown on Figure 2.

#### **Report on the Detail Plans for the Bedford II Landfill, April 1977.**

This report summarized that the Claycraft Company submitted detail plan to operate the Systematics Service Landfill.

#### **Bedford II Closure Plan Figures, Burgess and Niple, Limited, January 1987.**

The Ohio EPA files contain the Plan set from the Bedford II Landfill Closure Plan prepared by Burgess and Niple in January 1987. The Plan set contain existing elevations, leachate seep locations, soil cover characterization, revised drainage plans and final grading plans. Copies of the Plan set are included in Appendix D-2

### **Bedford II Remediation Plan, Burgess and Niple, Limited, August 1990.**

The Remediation Plan was submitted to address closure issues that the Ohio EPA noted concerning the lack of a proper closure of the Bedford II Landfill. A detailed survey of the property was conducted to aid in the preparation of a Site plan. The detail survey indicated the presence of 31 stockpiles of material that were suitable for cover material. The stockpiles were measured to be approximately 3,500 cubic yards.

In addition to the survey, test pits were conducted to determine the thickness and character of the landfill cover. A 100-foot grid system was constructed to determine possible test pit locations. A total of 90 test pit locations were conducted. The results of the test pits indicated that approximately 60% of the Property has less than 2 feet of cover material.

Leachate outbreaks were also noted during Site visits. Leachate outbreaks were located in the southwest portion of the landfill.

Burgess and Niple developed plans to address the remediation of the Bedford II Landfill. The noted problems to be remediate were: the need for proper cover of the Landfill Area, the re-grading of the Property that will aid in proper surface run off and eliminate "ponding" that was found on the Property, and to control the leachate seeps.

### **3.2 Federal and State Environmental Records**

An environmental database report generated by FirstSearch Technology Corporation (*FirstSearch*) was used to access environmental records for this report.<sup>3</sup> The proximity of the listed facilities was reviewed to determine the potential effect, if any, that these facilities may have on the Property. The databases that were searched included those specified by OAC 3745-300-06 (D)(2) and OAC 3745-300-06 (D)(3), as well as several additional federal and state databases.

*FirstSearch* contacts government agencies to receive updated records on a monthly or quarterly basis, depending on the database. As a result, additional listed facilities may exist within the specified search distance that *FirstSearch* has not identified. Hull has contacted specific agencies directly and compared the agency listings with the *FirstSearch* report. Due to the size of the property, Hull extended the search radii by 0.25 mile. A copy of the report prepared by

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<sup>3</sup> First Search Technology Corporation; Environmental *FirstSearch* Report; August 17, 2006.

*FirstSearch* is located in Appendix E. Proximity location maps are located in the *FirstSearch* report, which is included in Appendix E. These maps show sites reported in searched environmental databases within the 0.5, 0.75 and 1.25-mile search radius, depending on the database searched. This report only discusses the properties Hull verified to be located within the specified search distance of the Property boundaries. The search summary report, which is a table on page two of the *FirstSearch* report, lists the number of facilities located within the respective search radius.

In addition to the facilities identified in the database report, *FirstSearch* provides a list of orphan (non-geocoded) facilities. These facilities are listed in one or more databases, but do not have sufficient address information to be accurately located by *FirstSearch*. There are thirty-two (32) non-geocoded facilities included in the *FirstSearch* report. Seven of the facilities that were identified were within close proximity to the Property. Five of the seven were included on the Facility Index Identification System (FINDS) and are included in one or more State or Federal database; however, they are not suspected to present significant environmental concern to the Property. The sixth site, Advanced Digital and Screen Printing, located at 850 Science Boulevard (approximately 0.35 miles NE), is listed as being a RCRA small quantity generator (SQG). The final facility listed is the now closed Bedford I Landfill, which was listed in the report as a solid waste landfill.

### **3.2.1 United States Environmental Protection Agency**

The *FirstSearch* report identified nine (9) facilities as RCRA Generators within the specified search distance from the Property. The facilities included eight (8) small quantity generators (SQG) and one (1) large quantity generator (LQG). One of these facilities is listed as being immediately north of the Property at 1024 Enterprise Drive (Quality Wood Treating Company), and has a recorded violation. However, the violation is listed as being with bookkeeping, and therefore, is unlikely to adversely affect the Property.

The *FirstSearch* report also identified two (2) facilities as NFRAP, (CERCLA site in which an assessment has been complete and no further steps will be taken). One of the sites is listed as the Bedford II Landfill, (Property). The other site is shown as being the Bedford I Landfill, located at 950 Claycraft Road, approximately 0.33 miles NW of the Property.

As a quality check, Hull contacted the U.S. EPA directly.<sup>4</sup> A list of CERCLIS sites was received from the U.S. EPA and the Property was on this list, showing that it was a solid waste landfill (SWL) facility. Nine other addresses were listed on the list of CERCLIS sites. Seven (7) of the sites were already identified as being RCRA generator sites, while the other two (2) were shown as being on the Facility Index Identification System (FINDS) database.

There were no Emergency Response Notification System (ERNS) incidents reported for the Property or within a 0.75-mile radius of the Property.

A total of forty-two (42) Facility Index Identification System (FINDS) sites were identified within a 0.75-mile radius of the Property. The FINDS list indicates that the individual facilities are included in one or more of the Federal or State databases. Many of the FINDS sites included in the FirstSearch report were also included on the RCRA generator list and CERCLIS list. The remaining sites included in the database report are either listed as STATE sites, and will be discussed in the next section or they are not considered to present any significant environmental concern to the Property given their location and distance from the Property.

### **3.2.2 Ohio Environmental Protection Agency**

Two (2) Ohio EPA Ohio Master Sites List (MSL) facilities or landfill sites were identified in the *FirstSearch* database within the search distance. One of the properties on the Master Sites List is listed as being the Bedford II Landfill facility (Property). The other listed facility is the Bedford I Landfill located at 950 Claycraft Road (0.33 miles NW) and 470 Morrison Road (0.15 miles SW), respectively. Hull completed a Phase I for the former Bedford I Landfill under project number MEE001 (*Phase I Property Assessment: Bedford I Landfill Property*, MEE001.300.0013) in December 2002.

Hull reviewed the Ohio EPA Spills database for Franklin County obtained from the Division of Emergency and Remedial Response (DERR). There were spills noted as being within a 0.75 mile radius of the Property, however, none of these spills were of any magnitude to adversely affect the Property.

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<sup>4</sup> U.S. EPA, Written Correspondence, January 30, 2006.

### **3.2.3 Bureau of Underground Storage Tank Regulations (BUSTR)**

The *FirstSearch* report identified five facilities with either registered underground storage tanks (USTs) and/or leaking USTs (LUSTs) within one-half mile of the Property.

#### **3.2.3.1 Registered Underground Storage Tank**

One property was identified with 0.75 mile of the property as having a registered UST. The Gahanna Fueling Station, located at 781 Science Boulevard (0.30 miles NE), currently has two registered USTs. Both tanks have a storage capacity of 12,000 gallons, however, one tank is used for storing diesel fuel, while the other holds gasoline.

#### **3.2.3.2 Leaking Underground Storage Tank**

The *FirstSearch* report identified four (4) LUST sites within a 0.75-mile radius of the Property. The sites are: Quality Wood, located 0.13 miles immediately north of the Property, the Adrian L. Wallick Company, located at 1013 Gahanna Parkway (0.21 miles SE), the Gahanna Fueling Station, located at 781 Science Boulevard (0.35 NE), and Action Group, Inc., located at 935 Claycraft Road (0.28 miles NW). All of the aforementioned sites have received a letter of No Further Corrective Action (NFA) and are, therefore, not assumed to present any adverse effects to the Property.

As a quality assurance check, BUSTR<sup>5</sup> was contacted directly to determine if any additional files were available for properties within the specified search distance of the Site. There were no additional files found.

### **3.2.4 Ohio Department of Natural Resources Water Well Log Information**

Hull reviewed information from the Ohio Department of Natural Resources (ODNR) Division of Water, for water wells within a 0.5-mile radius of the Property boundary. The logs of five private wells within the specified radius were observed. One of the private located wells is located in the area of the former brick manufacturing buildings, south west of the Property. There was also an unlocated industrial well that was close to being within the specified search radius. The wells were typically completed in the underlying shale bedrock at depths ranging from 60 to 200 feet. Test pumping rates recorded during installation of the wells indicated the one well could sustain yields of 30 gallons per minute, while the others were no better than 3 to 4 gallons per minute. Copies of the well logs are provided in Appendix F. Other wells may be present within the

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<sup>5</sup> BUSTR online release search engine, August 17, 2006.

search distance but may not have been identified due to inaccurate well log location descriptions or unreported wells.

Hull conducted an Interview with Mr. Michael Craft (Craft Steel) on 10/4/2006, Mr. Craft indicated that two wells are located in or adjacent to buildings located on the Craft Steel property. According to ODNR, only one of the two wells has been located by ODNR.

### **3.3 Local and Other State Environmental Records**

#### **3.3.1 Local Fire Departments**

Hull contacted the Mifflin Township Fire Department to obtain information regarding fires, unauthorized discharges or dumping, spills, or any environmental problems involving toxic or hazardous substances at the Property.<sup>6</sup> On February 7, 2006 Mr. David Brizius responded to the request stating that the Mifflin Township Fire Department did not have any files on the Property. However, Mr. Brizius stated that he believed that Bedford II had an agreement with Columbus Steel Drum to accept waste, there was no documentation of this. A copy of the correspondence is included in Appendix C

#### **3.3.2 Local Health Department**

The Franklin County Health Department was contacted to obtain information regarding spills, releases, or any environmental problems involving toxic or hazardous substances at the Property.<sup>7</sup> Mr. Paul Wenning, Special Projects Coordinator for the County Health Department responded to Hull's request by telephone on January 27, 2006. Mr. Wenning indicated that the majority of the Health Department's files were copied to the Ohio EPA. Due to the volume of material reviewed by Hull in the files maintained by Ohio EPA, it was determined not to pursue retrieval of the Health Department's files from the archives. A copy of the correspondence is included in Appendix C.

#### **3.3.3 Ohio Department of Health**

The Ohio Department of Health has issued a general statement that it will only consider file requests if the files/reports are specifically named. Unless files and/or reports are specifically identified, the Ohio Department of Health files are not practically reviewable. Hull does not

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<sup>6</sup> Mifflin Township Fire Department, Telephone Call, January 27, 2006.

<sup>7</sup> Franklin County Health Department, Written Correspondence, January 24, 2006.



know of any specific files, and therefore did not send a request. A copy of the Ohio Department of Health's statement is included in Appendix C.

### **3.4 Additional Records**

#### **3.4.1 Oil and Gas Well Log Information**

The ODNR was contacted to obtain logs and locations of oil and gas wells located within one-half mile of the Property. The oil and gas map of Jefferson Township, Franklin County, Ohio indicates there are no recorded oil or gas wells located on, or within, one-half mile of the Property. Other oil and gas wells may be present within the search distance but may not have been identified due to inaccurate well log location descriptions or unreported oil and gas wells.

#### **3.4.2 Flood Insurance Rate Map**

A copy of the flood insurance rate map (FIRM) for the Property, map number 39049C0276 G, effective date August 2, 1995, was obtained from the ODNR Division of Water, Floodplain Management Unit. The map identifies areas that would be affected by a 100-year and 500-year flood. The 100 and 500-year floods are floods of such magnitude that the probability of such an event occurring is once every 100 to 500 years, respectively. The map identifies the Property, as being in Zone X. Zone X is an area determined to be outside the 500-year flood limits. Copies of the relevant portions of the panel are included in Appendix G.

#### **3.4.3 Local Geology and Hydrogeology**

The Property is located in the City of Gahanna, in north-eastern Franklin County, Ohio. The Property is located in the Columbus Lowlands region, in the Central Lowlands Province of Ohio. This area is characterized as lowland surrounded by uplands with a broad regional slope towards the Scioto Valley (Brockman, 1998). The Ground-water Resources map for Franklin County<sup>8</sup> describes the area as having Devonian and Mississippian shale bedrock. The bedrock produces less than 2 gallons per minute (gpm) at depths less than 100 feet. Thin lenses of sand and gravel may be encountered at depths of 18 to 45 feet that may yield as much as 5 gpm.

Given its proximity to the Bedford I Landfill, Hull reviewed prior reports for Bedford I Landfill. It is assumed that the hydrogeology of the site is quite similar and the shale mined for production

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<sup>8</sup> Ohio Department of Natural Resources, Division of Water, Groundwater Resources of Franklin County, 1958, Revised 1995.

of the bricks was the Bedford Shale. Therefore, it is further presumed that the base of the Bedford Shale was encountered at a similar elevation to that observed at Bedford I Landfill, approximately 800 to 810 feet msl. It does not appear that groundwater monitoring wells have ever been present at the site. Therefore, determinations of groundwater flow patterns are difficult at best. It is believed that shallow groundwater flow occurs along the soil bedrock interface and mimics the local surface topography. Therefore, shallow groundwater flow is presumed to be to the west and southwest toward Big Walnut Creek.

#### **4.0 HAZARDOUS SUBSTANCE AND PETROLEUM RELEASE HISTORY**

Based upon a review of the records described in Section 3.0 of this report, there are documented leachate outbreaks on the Property. Leachate outbreaks have been documented by Ohio EPA and Franklin County Health Department from November 1981 to July 1991. Numerous Chemicals of Concern were detected in the leachate. On February 11, 1981, the Ohio EPA sent The Columbus Clay Manufacturing Company a letter stating that discharging pollutants to the water of the State without a permit is a violation of the Ohio Revised Code Section 6111.04. Hull personnel did not observe leachate outbreaks along during the field reconnaissance in July 2006, although, discolored surface water was observed in the ditch located along the property line in the south-western portion of the Property adjacent to Craft Steel.

Landfill gas and the associated odors have reportedly been noted during site visits and /or inspections. A gas recovery system is in place on the Property. Gas extraction vents were observed on the Landfill by Hull personnel during the field reconnaissances.

During the initial "demolition" Landfill stages, it was documented by the Columbus Board of Health that additional materials were found at the Landfill that were industrial containers emanated solvents. According to the Ohio EPA's files, the documents from ECOL, Inc., the Bedford II Landfill accepted commercial, residential and industrial wastes. Additional documents indicated that the wastes consisted of Polyvinyl Chloride, Acrylic Resins, Plasticizers, inks, inorganic pigments, organic pigments, methyl ethyl ketone, water treatment, incinerator solids, and settling pit sludges.

The Ohio EPA files contained photographs taken in April 1974. The photographs depicted the waste material deposited at the Property. Observed waste include but not limited to; sealed and unsealed 55-gallon drums, buckets, wood planks and pallets, cardboard, construction debris, municipal waste, and household appliances. One of the pictures depicts drums and buckets disposed of in an area with standing water. The water is discolored with an orange tint and has a plume of red colored liquid.

Historically, there have been two incidents when refuse (fill) has been uncovered from the former landfill area. In 1982 the City of Gahanna was repairing the rail spur located on the north edge of the land fill property and cut into the landfill cover material and exposed fill material. Copies of the historic Property photographs are included in Appendix A-2

The Ohio EPA files also included a newspaper article that documents a discovered trench dug on the former landfill property. The trench appeared to be dug as a secondary drainage ditch for the Craft Steel. The Craft Steel occupies the 3.707 acre parcel that the former Claycraft Brick Company buildings and Bedford II Landfill buildings were located. The newspaper article also stated that a newly constructed building was illegally built and may be located on the former landfill area. These ditches were observed during Hull's site reconnaissance in July 2006.

## **5.0 PROPERTY RECONNAISSANCE**

### **5.1 General**

A property reconnaissance was performed of the former Bedford II Landfill. Hull representatives, Mr. Gross and Mr. Jonak, visited the Property on July 21, 2006 to determine if any operations or practices have adversely affected the environmental conditions of the Property. Photographs taken during the reconnaissances are included as Appendix A-1.

The site reconnaissance was performed to assess current use and operation of the Property, determine if there are any Identified Areas (IA), and assess the current conditions of the Identified Areas. A layout of the Property and surrounding land use is presented on Figure 2.

### **5.2 Surrounding Land Use**

The Property is located in the industrial section of Gahanna. The surrounding properties included, Craft Steel immediately adjacent to the west, the former Quality Wood Treating Company to the north, Adrian L. Wallick Company and Mid States to the east. Railroad tracks bind the Property to the south and undeveloped land lies beyond the railroad tracks.

### **5.3 Property**

The former Bedford II Landfill Property is currently undeveloped land with no habitably structures located on it. Gas extraction wells were observed in the landfill during the site reconnaissance on July 21, 2006 (photo 1). The gas lines are located and run along the surface of the Property (photo 2). At the western portion of the property, gas lines were observed to be cut, although, no odor was observed in this area (photo 3). It appears as the line may be decommissioned. It is also unclear when the system was installed. According to Ohio EPA personnel, landfill gas from the Bedford II Landfill is piped off Property to the north-northwest over to the Bedford I Landfill gas extraction and collection system. However, recent activities conducted at the former Bedford I Landfill have indicated that the Bedford II Landfill's gas extraction system is not running and has not operated for a period of time. Currently, the Bedford I Landfill system does not receive gas from the former Bedford II landfill.

The majority of the Bedford II Landfill is covered with thick vegetation (photo 4). Trees 10 to 12-inches in diameter were observed in the northwestern portion of the property (photo 5). Smaller and more recent trees were observed in the center portion of the Property (photo 6). Additional

vegetation included, tall grass, cottonwood, raspberries, and cattails. The cattails were observed in three areas on the property where either there was a depression in the Landfill surface or in the surrounding ditches.

A steep ditch was observed along Craft Steel's building. Large cattail, 5-7 feet in height were observed in the ditch (photo 7). Pieces of roofing insulation were also observed in the ditch. The roofing insulation was presumed to be from Craft Steel and where roofing damage was observed. Standing water also occupied the ditch at depths of 1 to 12 inches. A second area of cattail was observed south of the Craft Steel building (photo 8). The standing water at these locations showed signs of discoloration.

The third location of cattail was in the central portion of the property (photo 9). Cattails were approximately 6 to 10 feet in this location. No standing water was observed. It is presumed that this area is the location of former ponding problems on the property.

There were several areas on the cover in which no vegetation was observed. Short brush and poplar trees were observed growing on the cover material. There was visible brick and concrete debris in several locations on the landfill. During Hull's site visit, there were no leachate outbreaks observed. Only at a few isolated locations was there visible waste noted on the Property. Some subsidence or settling has occurred in several areas on the top of the Landfill.

Many mounds of soil are present on the Property. The mounds of soil are mostly located at the north-western and south-eastern portion of the Property. Many of these mounds are void of vegetation. It appears as though the soil was disposed after closure activities were started and can be correlated with the aerial photographs discussed in section 2.1.5 of the report. Additionally, former access points to the landfill Property are located in the vicinity of the mounds.

A crushed drum was observed with the mounds of soil in the southeastern portion of the property (photo 10). Due to the condition of the drum, the contents of the drum are unknown. Railroad and wooden debris are located throughout the Property. Red bricks and brick fragments are also located throughout the Property. Additional, trash and debris is located along the railroad tracks.

Vehicle tracks were observed in the tall grass of southeast portion of the property (photo 11). The tracks appear to start from the railroad tracks that lead to the adjacent property (Mid States).

Power lines run along the southern and western edge of the property. Transformers are located on the power pole (photo 12). No transformers or capacitors are located on the Property.

#### **5.4 Adjoining Properties**

The Property is bound to the north and east by a railroad spur that was used by the Claycraft Company and Norfolk Southern railroad south of the Site. Industrial properties are located north, east, and west of the Property beyond the rail road spur and undeveloped land lies south of the Property beyond the Norfolk Southern line.

The Craft Steel binds the western edge of the Property. The Craft Steel buildings are located on a portion of the former Columbus Clay Manufacturing Company and Bedford II Landfill property. The former buildings for the Claycraft Company and Bedford II buildings were located on the Craft Steel property. Undeveloped land also binds the Property to the northwest. A newspaper article from December 6, 1989 in the OHIO EPA's files indicated that the Craft Steel performed ore and metal smelting or reduction illegally prior to inspections conducted by the Mifflin Township Fire Department. Numerous fires at Craft Steel prompted the inspections. Additionally, the Craft Steel was thought to have been involved with the installation of a possible drainage ditch that was dug through the landfill into waste material on the former landfill property (Property). At that time it was discovered that Craft Steel had constructed a new building without proper permits and consent from the City of Gahanna. The newspaper article also states that it was believed that the new building might lie over the former fill area of the landfill.

Several industrial businesses are located in the immediate vicinity of the Property. The former Quality Wood Treating Company (1024 Enterprise Drive) and Siemens Airfield Solutions, (977 Gahanna Parkway), are located north of the Property. Adrian L. Wallick Company (1013 Enterprise Drive) and Mid State Sales (1011 Gahanna Parkway) are located east of the Property.

A Phase I and Phase II Environmental Assessments were conducted on the former Quality Wood Treating Company's property. The final conclusions from the two assessments were that COC's in soil and groundwater are not at levels above appropriate action levels. However, a landfill gas evaluation was conducted on the former Quality Wood Treating Company's property and methane gas was detected at levels below hazardous levels.

There was little evidence that operations on adjoining properties presented the potential for environmental impact to the Property. However, the observed tire tracks coming from the railroad tracks may be evidence of trespassing or other unauthorized dumping activities.

There were no transformers observed on the Property. However, pole mounted transformers were observed on the Craft Steel property during the property reconnaissance's.

#### **5.5 Asbestos and Lead Based Paint**

Due to the lack of structures located on the Property asbestos and lead paint was not observed. It is not known whether ACM and/or materials with lead-based paint have been disposed at the landfill during its operation.

#### **5.6 Interviews**

On October 4, 2006, Hull and Associates conducted a phone-interview with Mr. Michael Craft of Craft Steel Inc. (western adjacent property). Information provided by Mr. Craft was utilized in the preparation of this Phase I Property Assessment.

Hull and Associates also conducted interviews with Mrs. Laura Parkinson of the Ohio EPA.



## 6.0 FINDINGS AND CONCLUSIONS

Hull performed a Phase I Property Assessment of the former Columbus Clay Manufacturing Company and former Bedford II Landfill property (Property) located along Bricklawn and/or Morrison Roads in Gahanna, Ohio. The Property was first developed in the early 1900s by the Columbus Clay Manufacturing Company. In 1973, the property was leased to Ace Trash-Away and was operated as a demolition landfill. During that time, it was reported that additional material was illegally disposed of at the Landfill. In 1974, the property was then leased to Systematic Sanitation Services Inc. Systematic Sanitation Services Inc obtained a license from the Franklin County Health Department to operate a solid waste landfill. The landfill operated under Systematic Sanitation Services Inc until 1976, when the lease was not renewed. In May of 1976, the ECOL, Inc, a wholly owned subsidiary of the Claycraft Company, leased the Property and purchased the solid waste disposal license and continued to operate Bedford II Landfill. The Landfill was operated until 1978, when closure activities were started. Currently, closure activities have not been completed.

This assessment was conducted to determine if a release of hazardous substances or petroleum has or may have occurred on, is underlying, or is emanating from the Property and is consistent with OAC 3745-300-06. This assessment will be used in the preparation and development of a closure plan and if required, a plan for corrective measurements. The Phase I Property assessment also involved determining Identified Areas as that term is used in the regulations OAC 3745-300-0001. The assessment was based on information gained from a review of public documents, files, photographs, and maps; correspondence with regulatory agencies; a review of an environmental regulatory database search report; interviews with individuals and/or parties familiar with the Property; and a reconnaissance of the Property.

Historic and current uses of the Property are presented in Section 2.0. An environmental history of the Property is presented in Section 3.0. The hazardous substance and petroleum release history is presented in Section 4.0. Finally, a description of the Property inspection including the Property reconnaissance is presented in Section 5.0.

Based on available information, it is not documented that the Property has been properly closed. The Ohio EPA files contained correspondence stating that there was progress on the

closure activities of the former Landfill. However, no documentation was found that would verify the status of the closure.

#### **6.1 Voluntary Action Program Eligibility**

Based on Hull's review of documents including the consent order, the majority of the Property does not appear to be eligible for Ohio's Voluntary Action Program as codified in OAC 3745-27-13. The referenced section of the VAP rules indicates that facilities requiring closure under Chapter 3734 of the Ohio Revised Code (ORC) are not eligible for the VAP program.

Phase II ESA activities are warranted, however, to determine whether petroleum substances and/or hazardous substances are present on the Property. The activities should be conducted in the Identified Areas listed in the following section.

#### **6.2 Identified Areas Located on the Property**

Identified Areas for this Property were established based on past facility operations and/or current conditions at the Property. The Identified Areas include the following:

1. The landfill cover material. Many mounds of soil were observed in the historical aerial photographs and site reconnaissance and their origin is unknown. It appears as though the soil was disposed after closure activities were started. The soil has the potential for petroleum contaminants within the soil. Potential COCs include volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and total petroleum hydrocarbons (TPH)(C6-C12 and C10-C34) and RCRA 8 metals;
2. The limits of waste. Although, it is unknown the full extent of the fill area. Excavations encountered fill on the northern and southwestern edges of the property. Special wastes and potentially hazardous wastes were reportedly landfilled during the operation of the landfill. Leachate has been observed on Property. Potential COCs include benzene, toluene, ethylbenzene, and xylene (BTEX) and other VOCs, PAHs, TPH C6-C12 and C10-C34, RCAR 8 metals, herbicides, pesticides and Polychlorinated Biphenyls (PCBs);
3. Areas immediately surrounding the limits of waste have the potential of groundwater impact by the Landfill. Potential COCs include VOCs, SVOCs, TPH C6-C12 and C10-C34, RCRA 8 metals, herbicides, pesticides and PCBs;
4. Areas surrounding the limits of waste, where there is a potential for the migration landfill gas away from the limits of waste. Based on the documented specialty waste, the landfill gas has the potential to contain hazardous constituents and explosive gas. Potential COCs include VOCs and explosive gases.

## **7.0 STANDARD OF CARE AND LIMITATIONS**

The conclusions and recommendations presented herein are based on the level of effort and investigative techniques using that degree of care and skill ordinarily exercised under similar conditions by reputable members of the profession practicing the same or similar locality at the time of the service. No other warranty, express or implied, is made or intended by this report. An evaluation of past or present compliance with federal, state, or local environmental or land use laws or regulations has not been conducted, except to the extent the compliance relates to releases of hazardous substances or petroleum and to factors which may affect the eligibility of the Property under Ohio's Voluntary Action Program. Conclusions presented by Hull regarding the investigated Property are consistent with the Scope of Work, level of effort specified, and investigative techniques employed. Reports, opinions, letters and other documents do not evaluate the presence or absence of any compound or parameter not specifically analyzed and reported. Specifically, the presence of radiation, radon, lead, electromagnetic fields, and indoor air pollution has not been investigated. Hull makes no guarantees regarding the completeness or accuracy of any information obtained from public or private files or information provided by subcontractors. In addition, Hull makes no guarantees on the condition of the Property records after the date reviewed as indicated in the report.

Furthermore, this report is prepared for, and made available for the sole use of the City of Gahanna, Ohio and the contents thereof may not be used or relied upon by any other person without express written consent and authorization of the City of Gahanna, Ohio and Hull.

## 8.0 REFERENCES

A variety of technical documents and publications were referred to during the course of this project. Some of the references consulted are presented below. Referenced documents and publications may or may not have been reviewed in their entirety. The guidelines and procedures presented in the documents and publications referenced have not been strictly adhered to unless stated otherwise.

### 8.1 Documents

Brockman, C. Scott, Ohio Department of Natural Resources, Division of Geological Survey, Physiographic Regions of Ohio (map), 1998.

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Phase I Environmental Site Assessment Report for Quality Wood Treating Company, KU Resources, Inc., October 2004

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State of Ohio, Department of Natural Resources, National Flood Insurance Program, *Flood Insurance Rate Map, Franklin County, Ohio and Incorporated Areas; Map Number 39049C0276 G, August 2, 1995.*